
Hazus: Earthquake Global Risk Report

Region Name: AnacapaDumealt1

Earthquake Scenario: anacapadumealt1ellbg_m7p2_se

Print Date: May 15, 2024

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

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General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 9 county(ies) from the following state(s):

California

Note:

Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 52,605.28 square miles and contains 5,430 census tracts. There are over 7,901 thousand households in the region which has a total population of 23,583,202 people. The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 6,701 thousand buildings in the region with a total building replacement value (excluding contents) of (millions of dollars). Approximately 90.00 % of the buildings (and % of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 270,872 and 170,879 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 6,701 thousand buildings in the region which have an aggregate total replacement value of (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 87% of the building inventory. The remaining percentage is distributed between the other general building types.

Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 330 hospitals in the region with a total bed capacity of 61,087 beds. There are 7,426 schools, 1,299 fire stations, 434 police stations and 118 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes no hazardous material sites, no military installations and no nuclear power plants.

Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 441,751.00 (millions of dollars). This inventory includes over 10,915.62 miles of highways, 10,844 bridges, 229,786.72 miles of pipes.

Table 1: Transportation System Lifeline Inventory

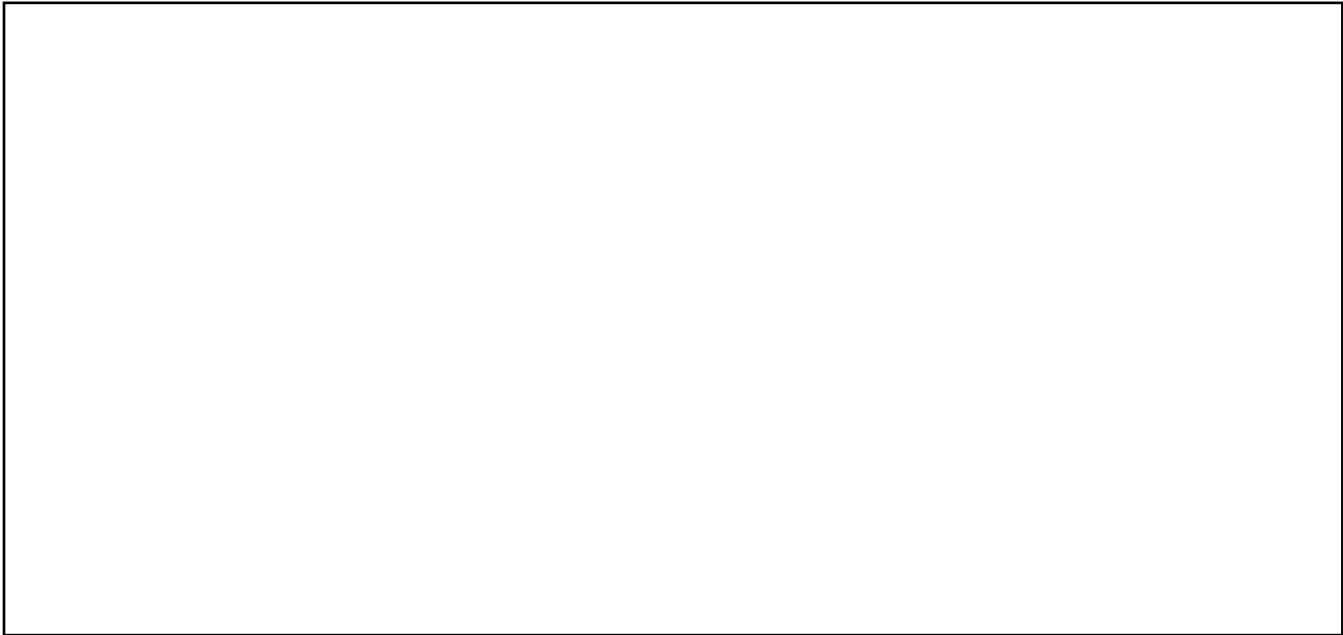
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	10,844	65942.5146
	Segments	9,708	115351.1324
	Tunnels	62	553.5147
	Subtotal		181847.1617
Railways	Bridges	1,645	9360.0500
	Facilities	108	287.6040
	Segments	1,710	62777.0058
	Tunnels	0	0.0000
	Subtotal		72424.6598
Light Rail	Bridges	51	13.2750
	Facilities	149	3200.8000
	Segments	8	5399.1047
	Tunnels	0	0.0000
	Subtotal		8613.1797
Bus	Facilities	39	84.3959
	Subtotal		84.3959
Ferry	Facilities	22	29.2820
	Subtotal		29.2820
Port	Facilities	354	1349.3930
	Subtotal		1349.3930
Airport	Facilities	144	4690.6343
	Runways	157	1834.1583
	Subtotal		6524.7926
		Total	270,872.90

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	4558.8680
	Facilities	50	1964.7000
	Pipelines	0	0.0000
		Subtotal	6523.5680
Waste Water	Distribution Lines	NA	2735.3208
	Facilities	118	20290.3124
	Pipelines	0	0.0000
		Subtotal	23025.6332
Natural Gas	Distribution Lines	NA	1823.5472
	Facilities	42	1475.0374
	Pipelines	331	17953.1243
		Subtotal	21251.7089
Oil Systems	Facilities	67	7.9060
	Pipelines	0	0.0000
		Subtotal	7.9060
Electrical Power	Facilities	512	120021.5026
		Subtotal	120021.5026
Communication	Facilities	418	49.3240
		Subtotal	49.3240
	Total		170,879.60

Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.



Scenario Name	anacapadumealt1ellbg_m7p2_se
Type of Earthquake	User-defined
Fault Name	NA
Historical Epicenter ID #	NA
Probabilistic Return Period	NA
Longitude of Epicenter	NA
Latitude of Epicenter	NA
Earthquake Magnitude	7.20
Depth (km)	NA
Rupture Length (Km)	NA
Rupture Orientation (degrees)	NA
Attenuation Function	NA

Direct Earthquake Damage

Building Damage

Hazus estimates that about 46,212 buildings will be at least moderately damaged. This is over 1.00 % of the buildings in the region. There are an estimated 293 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

Damage Categories by General Occupancy Type

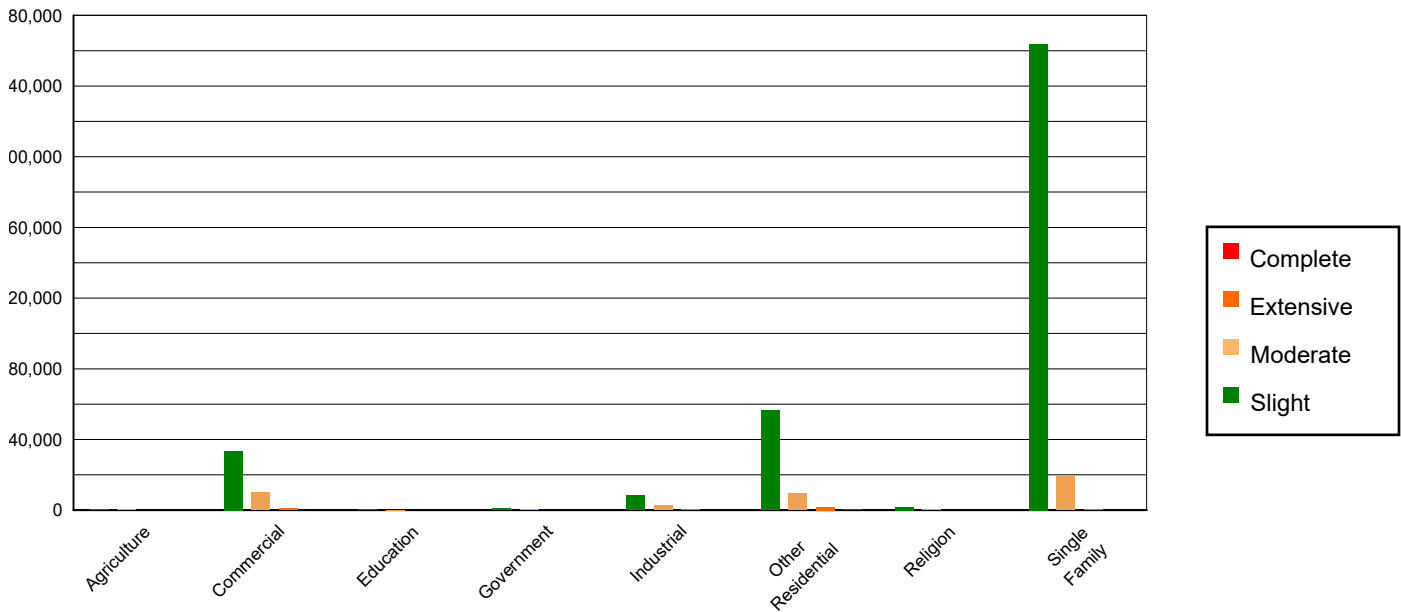


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	14356.80	0.23	466.58	0.13	165.56	0.39	22.25	0.66	1.82	0.62
Commercial	413262.40	6.57	33515.68	9.17	9936.73	23.35	907.67	27.01	60.53	20.64
Education	12120.67	0.19	472.40	0.13	121.14	0.28	8.30	0.25	0.48	0.17
Government	33873.24	0.54	724.56	0.20	255.47	0.60	30.44	0.91	2.29	0.78
Industrial	108231.28	1.72	8456.04	2.31	2682.88	6.30	270.52	8.05	16.27	5.55
Other Residential	973863.36	15.48	56367.35	15.42	9413.05	22.12	1750.01	52.08	184.22	62.83
Religion	20767.22	0.33	1784.20	0.49	507.92	1.19	41.03	1.22	1.63	0.56
Single Family	4713305.08	74.94	263784.70	72.16	19476.11	45.76	330.13	9.82	25.98	8.86
Total	6,289,780		365,572		42,559		3,360		293	

Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	5534951.97	88.00	307742.19	84.18	20462.90	48.08	200.06	5.95	6.67	2.27
Steel	105694.29	1.68	11356.82	3.11	5220.93	12.27	668.85	19.90	45.58	15.54
Concrete	104332.49	1.66	11978.71	3.28	3622.01	8.51	393.91	11.72	36.08	12.30
Precast	49498.17	0.79	4620.77	1.26	1761.61	4.14	126.46	3.76	6.78	2.31
RM	280151.02	4.45	16298.42	4.46	4322.21	10.16	256.29	7.63	12.25	4.18
URM	19267.33	0.31	7533.93	2.06	3596.74	8.45	435.40	12.96	52.33	17.85
MH	195884.78	3.11	6040.67	1.65	3572.46	8.39	1279.38	38.07	133.55	45.55
Total	6,289,780		365,572		42,559		3,360		293	

*Note:

- RM Reinforced Masonry
- URM Unreinforced Masonry
- MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 61,087 hospital beds available for use. On the day of the earthquake, the model estimates that only 57,008 hospital beds (93.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 98.00% of the beds will be back in service. By 30 days, 100.00% will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	330	3	0	319
Schools	7,426	77	0	7,113
EOCs	118	1	0	117
PoliceStations	434	3	0	421
FireStations	1,299	13	0	1,257

Transportation Lifeline Damage

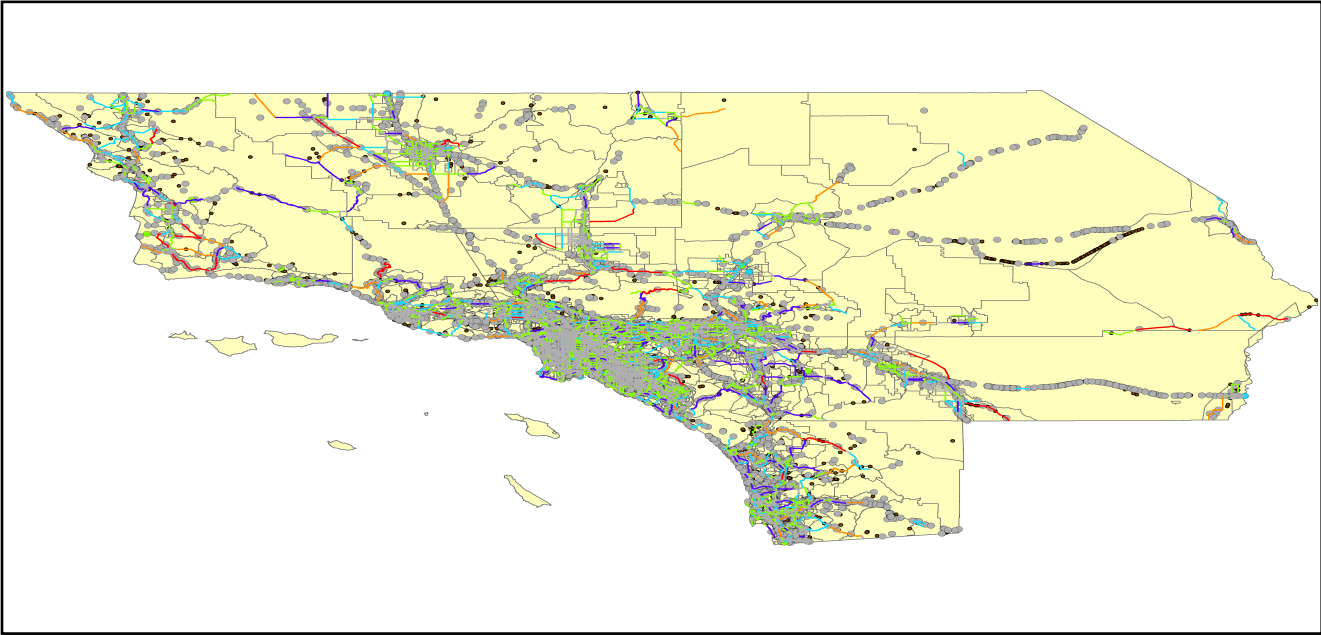


Table 6: Expected Damage to the Transportation Systems

System	Component	Number of Locations_				
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	9,708	0	0	9,708	9,708
	Bridges	10,844	13	1	10,829	10,834
	Tunnels	62	0	0	62	62
Railways	Segments	1,710	0	0	1,710	1,710
	Bridges	1,645	0	0	1,645	1,645
	Tunnels	0	0	0	0	0
	Facilities	108	0	0	108	108
Light Rail	Segments	8	0	0	8	8
	Bridges	51	0	0	51	51
	Tunnels	0	0	0	0	0
	Facilities	149	0	0	149	149
Bus	Facilities	39	0	0	39	39
Ferry	Facilities	22	0	0	22	22
Port	Facilities	354	1	0	353	354
Airport	Facilities	144	6	0	142	144
	Runways	157	0	0	157	157

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.

Table 7 : Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	50	2	0	47	50
Waste Water	118	8	0	102	115
Natural Gas	42	0	0	42	42
Oil Systems	67	0	0	67	67
Electrical Power	512	11	0	503	511
Communication	418	5	0	416	418

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	141,637	3457	864
Waste Water	84,982	1736	434
Natural Gas	3,167	0	0
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	7,901,979	26,142	15,808	3,499	0	0
Electric Power		96,491	58,930	22,862	2,000	134

Induced Earthquake Damage

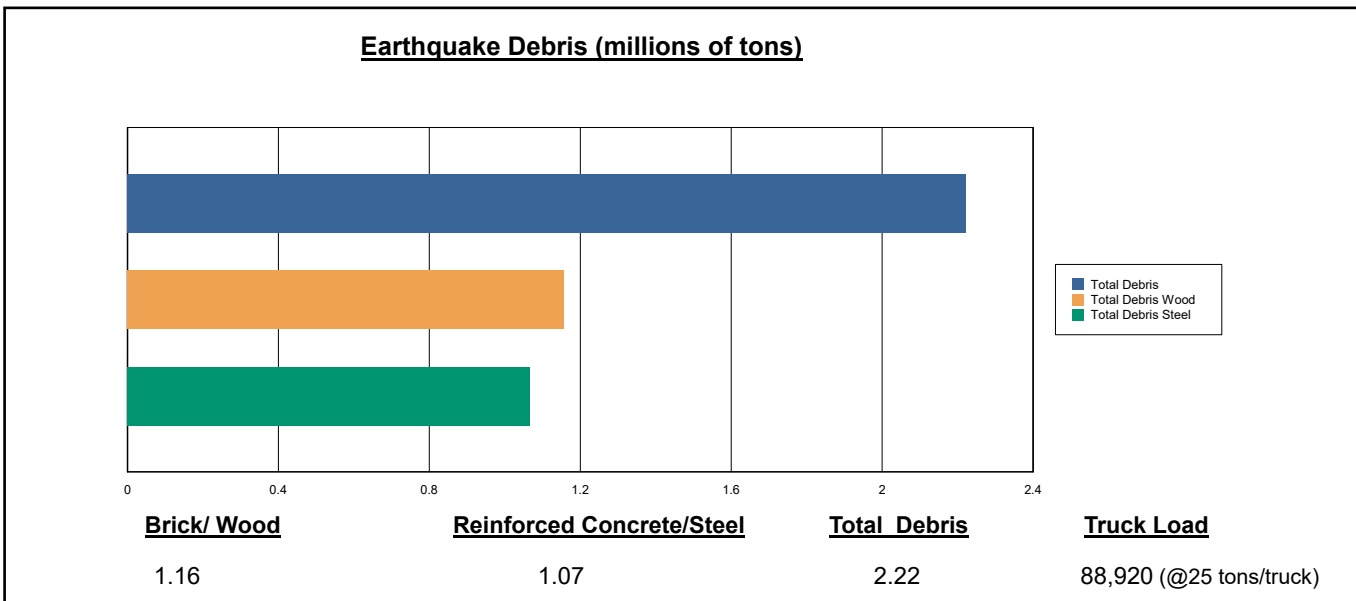
Fire Following Earthquake

Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 66 ignitions that will burn about 0.16 sq. mi (0.00 % of the region's total area.) The model also estimates that the fires will displace about 2,025 people and burn about 204 (millions of dollars) of building value.

Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

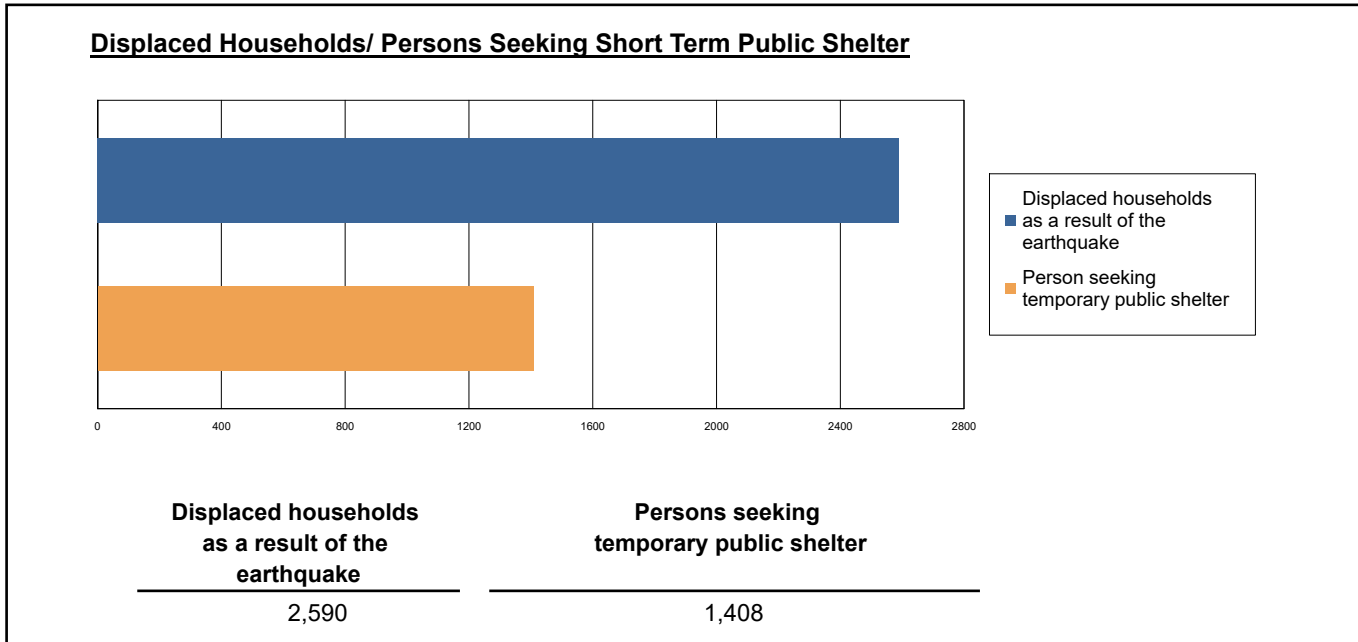
The model estimates that a total of 2,223,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 52.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 88,920 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.



Social Impact

Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 2,590 households to be displaced due to the earthquake. Of these, 1,408 people (out of a total population of 23,583,202) will seek temporary shelter in public shelters.



Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake

Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	15.97	1.55	0.08	0.15
	Commuting	0.13	0.18	0.30	0.06
	Educational	0.00	0.00	0.00	0.00
	Hotels	1.37	0.12	0.00	0.01
	Industrial	16.20	1.68	0.09	0.17
	Other-Residential	632.13	51.42	2.33	4.21
	Single Family	564.01	20.74	0.43	0.83
	Total	1,230	76	3	5
2 PM	Commercial	1029.45	101.48	5.33	10.01
	Commuting	1.17	1.61	2.66	0.52
	Educational	306.22	27.49	1.25	2.37
	Hotels	0.26	0.02	0.00	0.00
	Industrial	118.36	12.37	0.68	1.27
	Other-Residential	194.20	16.45	0.76	1.33
	Single Family	161.03	6.53	0.17	0.30
	Total	1,811	166	11	16
5 PM	Commercial	691.96	68.72	3.67	6.81
	Commuting	21.60	29.67	49.05	9.55
	Educational	55.85	3.89	0.01	0.02
	Hotels	0.41	0.04	0.00	0.00
	Industrial	73.97	7.73	0.42	0.79
	Other-Residential	234.72	19.61	0.92	1.63
	Single Family	205.11	7.99	0.19	0.34
	Total	1,284	138	54	19

Economic Loss

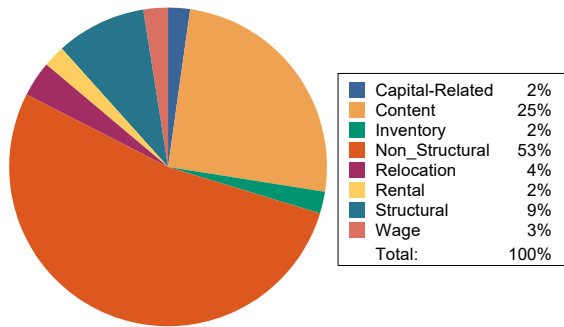
The total economic loss estimated for the earthquake is 30,032.32 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 23,785.05 (millions of dollars); 11 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 50 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.

Earthquake Losses by Loss Type (\$ millions)



Earthquake Losses by Occupancy Type (\$ millions)

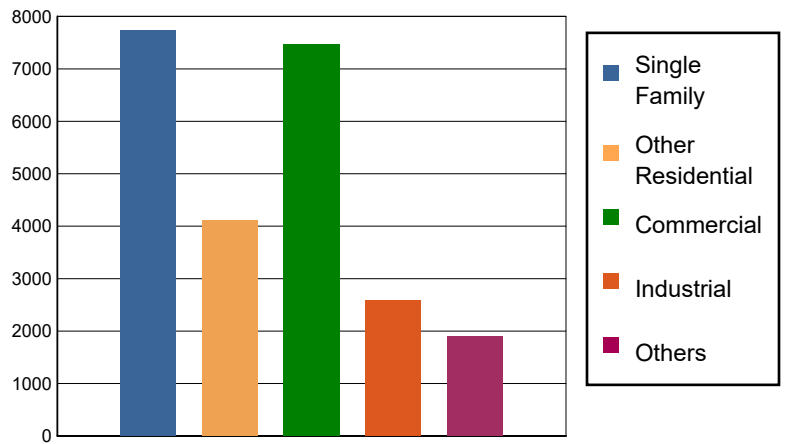


Table 11: Building-Related Economic Loss Estimates
(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	50.4455	487.0853	20.2434	48.1110	605.8852
	Capital-Related	0.0000	21.4372	456.2162	12.7810	13.3672	503.8016
	Rental	59.3474	185.2188	297.7509	12.3456	19.5966	574.2593
	Relocation	167.8433	109.7253	363.3562	59.8741	133.7279	834.5268
	Subtotal	227.1907	366.8268	1604.4086	105.2441	214.8027	2518.4729
Capital Stock Losses							
	Structural	750.9652	348.0949	671.2720	198.8485	176.9810	2,146.1616
	Non_Structural	4867.9617	2592.7458	2976.9992	1236.1464	908.7311	12,582.5842
	Content	1877.2695	800.4385	1881.5268	904.4719	559.2086	6,022.9153
	Inventory	0.0000	0.0000	337.5766	137.5648	39.7737	514.9151
	Subtotal	7496.1964	3741.2792	5867.3746	2477.0316	1684.6944	21266.5762
	Total	7723.39	4108.11	7471.78	2582.28	1899.50	23785.05

Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

Table 12: Transportation System Economic Losses
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	115351.1324	0.0000	0.00
	Bridges	65942.5146	118.1892	0.18
	Tunnels	553.5147	5.3336	0.96
	Subtotal	181847.1617	123.5228	
Railways	Segments	62777.0058	0.0000	0.00
	Bridges	9360.0500	2.3522	0.03
	Tunnels	0.0000	0.0000	0.00
	Facilities	287.6040	13.3131	4.63
	Subtotal	72424.6598	15.6653	
Light Rail	Segments	5399.1047	0.0000	0.00
	Bridges	13.2750	0.0013	0.01
	Tunnels	0.0000	0.0000	0.00
	Facilities	3200.8000	182.1751	5.69
	Subtotal	8613.1797	182.1764	
Bus	Facilities	84.3959	3.2928	3.90
	Subtotal	84.3959	3.2928	
Ferry	Facilities	29.2820	1.6357	5.59
	Subtotal	29.2820	1.6357	
Port	Facilities	1349.3930	79.2541	5.87
	Subtotal	1349.3930	79.2541	
Airport	Facilities	4690.6343	313.0601	6.67
	Runways	1834.1583	0.0000	0.00
	Subtotal	6524.7926	313.0601	
Total		270,872.86	718.61	

Table 13: Utility System Economic Losses
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	1964.7000	50.4199	2.57
	Distribution Lines	4558.8680	15.5548	0.34
	Subtotal	6523.5680	65.9747	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	20290.3124	604.2000	2.98
	Distribution Lines	2735.3208	7.8136	0.29
	Subtotal	23025.6332	612.0136	
Natural Gas	Pipelines	17953.1243	0.0000	0.00
	Facilities	1475.0374	21.5611	1.46
	Distribution Lines	1823.5472	2.6769	0.15
	Subtotal	21251.7089	24.2380	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	7.9060	0.1381	1.75
	Subtotal	7.9060	0.1381	
Electrical Power	Facilities	120021.5026	4825.3011	4.02
	Subtotal	120021.5026	4825.3011	
Communication	Facilities	49.3240	0.9984	2.02
	Subtotal	49.3240	0.9984	
	Total	170,879.64	5,528.66	

Appendix A: County Listing for the Region

Kern,CA

Los Angeles,CA

Orange,CA

Riverside,CA

San Bernardino,CA

San Diego,CA

San Luis Obispo,CA

Santa Barbara,CA

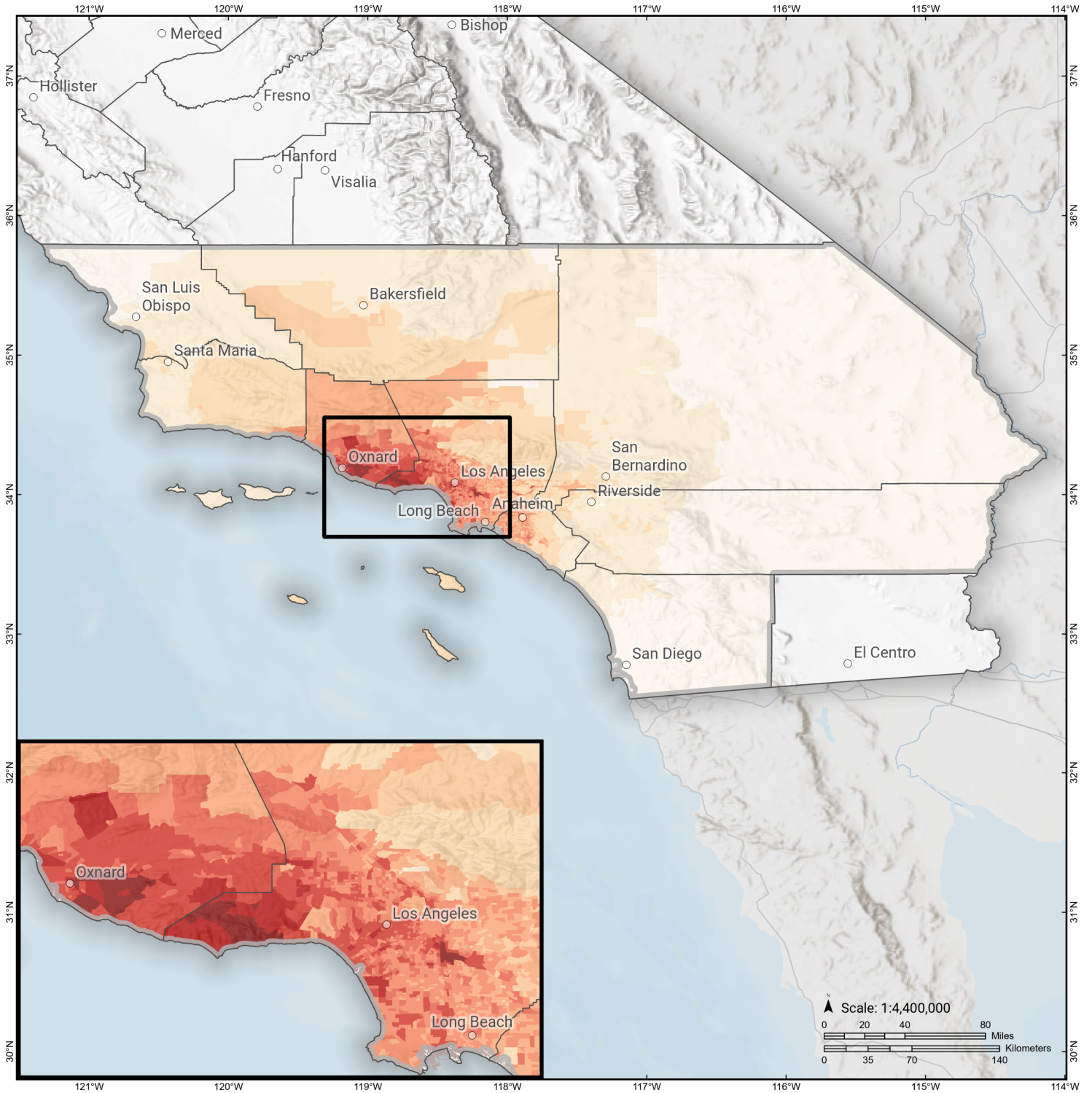
Ventura,CA

Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California	Kern	909,235	87,567	59,168	146,736
	Los Angeles	10,014,009	950,697	566,995	1,517,692
	Orange	3,186,989	363,381	176,806	540,188
	Riverside	2,418,185	281,482	137,249	418,731
	San Bernardino	2,181,654	225,045	152,557	377,602
	San Diego	3,298,634	375,834	193,238	569,072
	San Luis Obispo	282,424	41,720	20,896	62,616
	Santa Barbara	448,229	49,971	28,481	78,452
	Ventura	843,843	99,299	52,072	151,371
Total Region		23,583,202	2,474,996	1,387,462	3,862,460

Anacapa-Dume alt 1

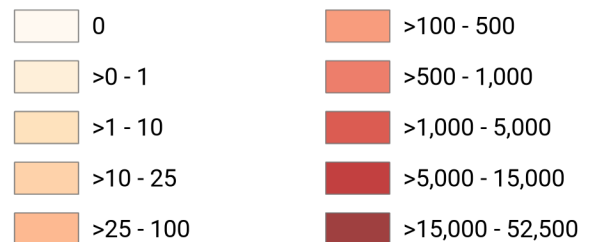
Debris Generated by Census Tract



Study Region: Anacapa-Dume alt 1
Scenario: anacapadumealt1ellbg_m7p2_se

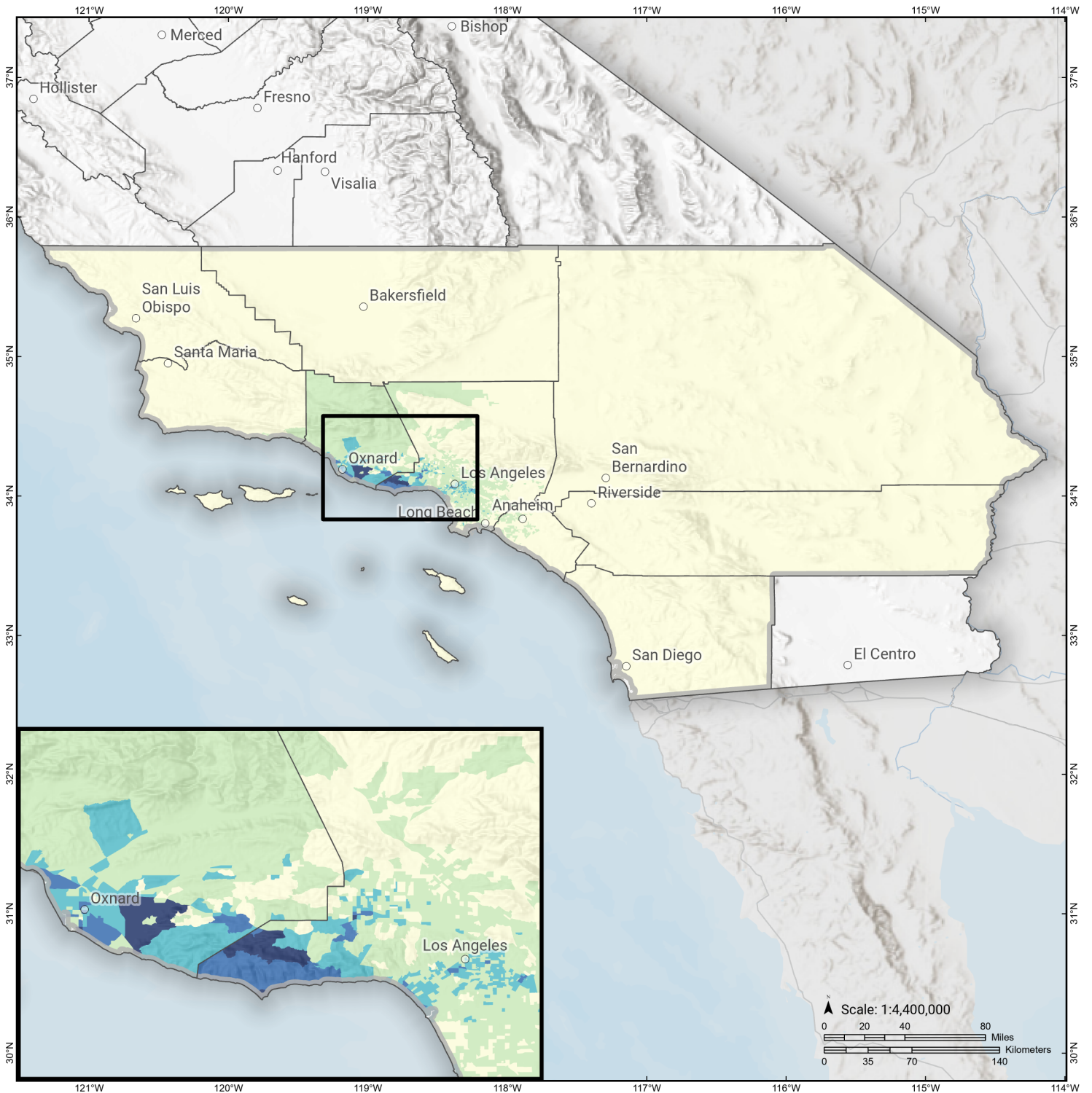


Debris Generated (in tons)



Anacapa-Dume alt 1

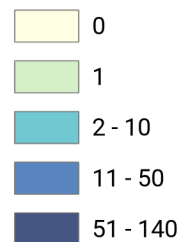
Displaced Households by Census Tract



Study Region: Anacapa-Dume alt 1
Scenario: anacapadumealt1ellbg_m7p2_se

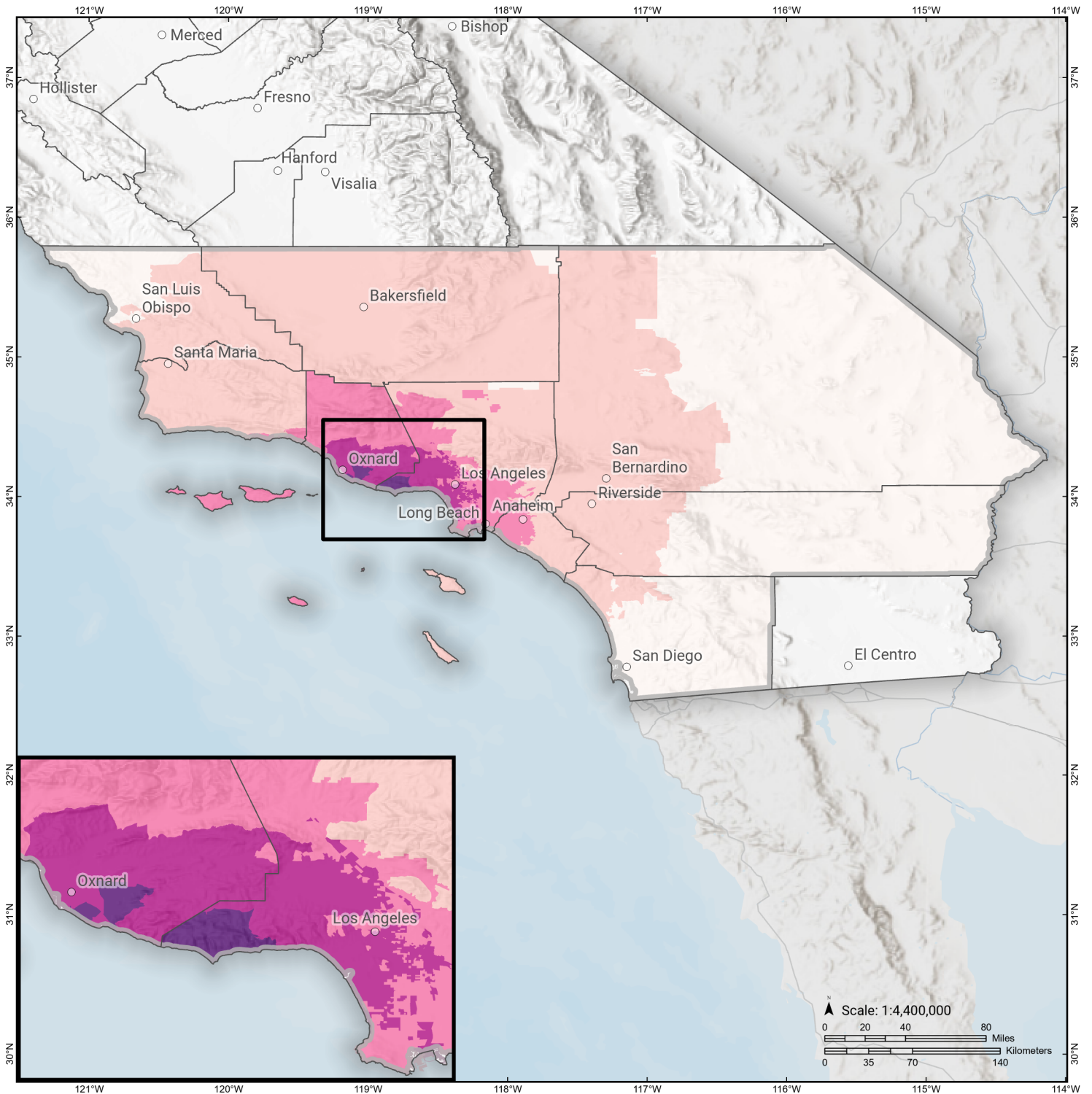


Displaced Households



Anacapa-Dume alt 1

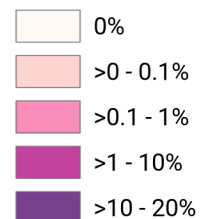
Loss Ratio by Census Tract



Study Region: Anacapa-Dume alt 1
Scenario: anacapadumealt1ellbg_m7p2_se

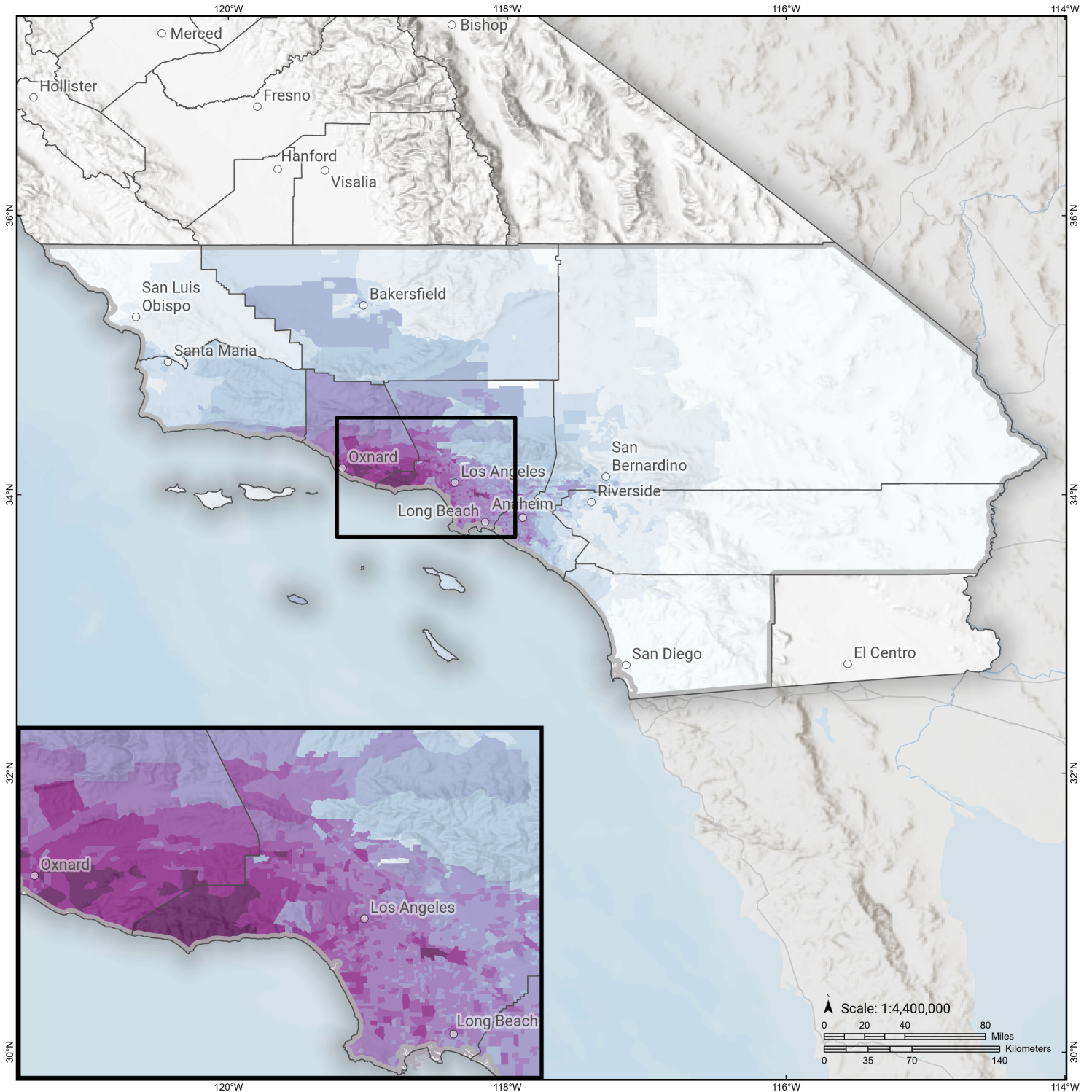


Loss Ratio (ratio of building related economic loss to exposed value of buildings)



Anacapa-Dume alt 1

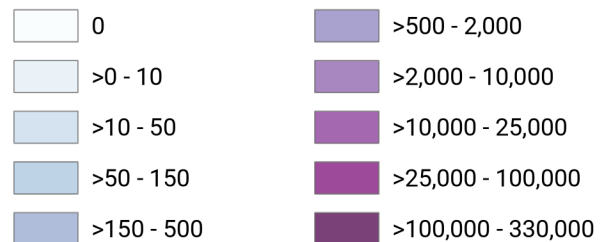
Total Building Related Economic Loss by Census Tract



Study Region: Anacapa-Dume alt 1
Scenario: anacapadumealt1ellbg_m7p2_se



Economic Loss (in thousands of USD \$)



Building Damage by Count by General Occupancy

May 15, 2024

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
California						
Kern						
<i>Agriculture</i>	4,641	4	0	0	0	4,645
<i>Commercial</i>	15,559	8	0	0	0	15,567
<i>Education</i>	462	0	0	0	0	462
<i>Government</i>	443	0	0	0	0	443
<i>Industrial</i>	6,044	3	0	0	0	6,047
<i>Religion</i>	1,523	1	0	0	0	1,524
<i>Other Residential</i>	54,439	78	3	0	0	54,520
<i>Single Family</i>	205,125	14	0	0	0	205,139
Los Angeles						
<i>Agriculture</i>	1,688	242	89	12	1	2,032
<i>Commercial</i>	155,259	26,959	7,905	698	40	190,861
<i>Education</i>	5,036	351	93	7	0	5,486
<i>Government</i>	2,527	383	112	8	0	3,031
<i>Industrial</i>	45,161	5,943	1,827	185	10	53,126
<i>Religion</i>	8,853	1,394	375	28	1	10,651
<i>Other Residential</i>	430,307	44,747	5,807	736	75	481,671
<i>Single Family</i>	1,613,026	176,934	12,845	309	26	1,803,140
Orange						

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Agriculture</i>	1,108	24	3	0	0	1,135
<i>Commercial</i>	66,895	1,331	113	1	0	68,340
<i>Education</i>	1,880	10	1	0	0	1,890
<i>Government</i>	632	16	1	0	0	650
<i>Industrial</i>	18,331	423	41	0	0	18,795
<i>Religion</i>	2,007	45	4	0	0	2,057
<i>Other Residential</i>	83,068	2,442	208	0	0	85,718
<i>Single Family</i>	699,586	6,598	27	0	0	706,212
Riverside						
<i>Agriculture</i>	1,713	0	0	0	0	1,713
<i>Commercial</i>	46,349	7	0	0	0	46,357
<i>Education</i>	990	0	0	0	0	990
<i>Government</i>	7,174	1	0	0	0	7,175
<i>Industrial</i>	6,408	1	0	0	0	6,409
<i>Religion</i>	1,319	0	0	0	0	1,319
<i>Other Residential</i>	122,749	49	1	0	0	122,799
<i>Single Family</i>	605,425	30	0	0	0	605,455
San Bernardino						
<i>Agriculture</i>	1,813	2	0	0	0	1,815
<i>Commercial</i>	40,011	29	1	0	0	40,041
<i>Education</i>	985	0	0	0	0	985
<i>Government</i>	1,237	1	0	0	0	1,238
<i>Industrial</i>	9,467	7	0	0	0	9,474
<i>Religion</i>	2,318	2	0	0	0	2,320
<i>Other Residential</i>	98,666	149	6	0	0	98,821

	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Single Family</i>	525,249	117	1	0	0	525,367
San Diego						
<i>Agriculture</i>	2,190	0	0	0	0	2,190
<i>Commercial</i>	62,369	0	0	0	0	62,369
<i>Education</i>	1,932	0	0	0	0	1,932
<i>Government</i>	20,924	0	0	0	0	20,924
<i>Industrial</i>	14,313	0	0	0	0	14,313
<i>Religion</i>	3,063	0	0	0	0	3,063
<i>Other Residential</i>	127,557	2	0	0	0	127,559
<i>Single Family</i>	763,020	0	0	0	0	763,020
San Luis Obispo						
<i>Agriculture</i>	421	0	0	0	0	421
<i>Commercial</i>	9,375	0	0	0	0	9,375
<i>Education</i>	182	0	0	0	0	182
<i>Government</i>	185	0	0	0	0	185
<i>Industrial</i>	2,556	0	0	0	0	2,556
<i>Religion</i>	360	0	0	0	0	360
<i>Other Residential</i>	20,214	2	0	0	0	20,216
<i>Single Family</i>	85,639	0	0	0	0	85,639
Santa Barbara						
<i>Agriculture</i>	460	4	0	0	0	464
<i>Commercial</i>	9,691	119	10	0	0	9,820
<i>Education</i>	298	1	0	0	0	299
<i>Government</i>	237	2	0	0	0	239
<i>Industrial</i>	2,795	40	4	0	0	2,840

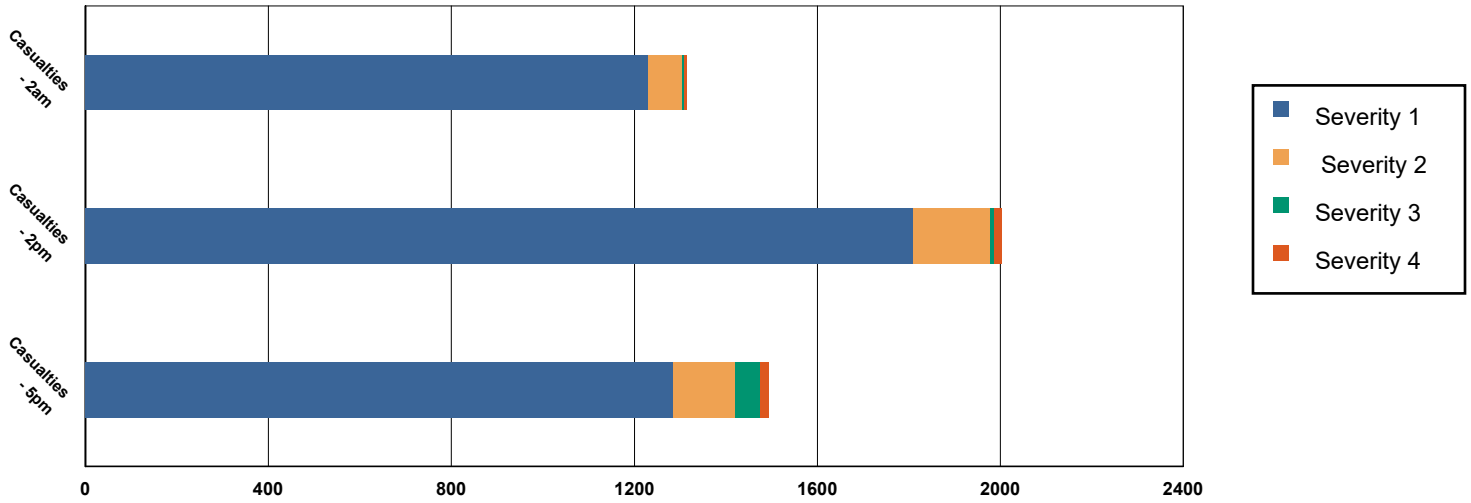
	# of Buildings					Total
	None	Slight	Moderate	Extensive	Complete	
<i>Religion</i>	614	6	1	0	0	621
<i>Other Residential</i>	23,647	425	39	0	0	24,111
<i>Single Family</i>	98,436	545	1	0	0	98,982
Ventura						
<i>Agriculture</i>	323	191	73	10	1	598
<i>Commercial</i>	7,755	5,063	1,907	208	20	14,953
<i>Education</i>	357	111	27	2	0	497
<i>Government</i>	514	321	142	22	2	1,001
<i>Industrial</i>	3,156	2,039	811	85	6	6,097
<i>Religion</i>	710	335	128	13	1	1,187
<i>Other Residential</i>	13,216	8,474	3,349	1,014	109	26,163
<i>Single Family</i>	117,799	79,548	6,600	21	0	203,968
Total	6,289,780	365,572	42,559	3,360	293	6,701,564
Region Total	6,289,780	365,572	42,559	3,360	293	6,701,564

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Casualties Summary Report

May 15, 2024

Region Total Casualties



Injury Severity Level

Severity 1	Severity 2	Severity 3	Severity 4	Total
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California

Kern

Casualties - 2am

	Severity 1	Severity 2	Severity 3	Severity 4	Total
Commercial	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Single Family	0	0	0	0	0
Other-Residential	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0

Casualties - 2pm

Educational	0	0	0	0	0
Commuting	0	0	0	0	0
Single Family	0	0	0	0	0
Hotels	0	0	0	0	0
Other-Residential	0	0	0	0	0
Commercial	0	0	0	0	0
Industrial	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Kern					
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
Single Family	0	0	0	0	0
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Los Angeles					
Casualties - 2am					
Hotels	1	0	0	0	1
Industrial	10	1	0	0	11
Educational	0	0	0	0	0
Single Family	367	14	0	1	383
Commuting	0	0	0	0	0
Other-Residential	453	28	1	1	483
Commercial	12	1	0	0	13
Total Casualties - 2am	844	44	1	2	892
Casualties - 2pm					
Industrial	72	7	0	1	79
Other-Residential	140	9	0	0	149
Commercial	764	71	3	6	844
Commuting	1	1	1	0	3
Educational	214	16	0	1	231
Single Family	106	5	0	0	111
Hotels	0	0	0	0	0
Total Casualties - 2pm	1,297	109	6	8	1,419
Casualties - 5pm					
Other-Residential	169	11	0	0	181
Industrial	45	4	0	0	50
Commuting	11	16	26	5	59
Single Family	134	5	0	0	140
Commercial	502	47	2	4	554
Hotels	0	0	0	0	0
Educational	45	3	0	0	49
Total Casualties - 5pm	906	87	29	10	1,032
Orange					
Casualties - 2am					
Hotels	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Orange					
Casualties - 2am					
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	10	0	0	0	11
<i>Commercial</i>	0	0	0	0	0
<i>Single Family</i>	12	0	0	0	12
Total Casualties - 2am	23	0	0	0	23
Casualties - 2pm					
<i>Industrial</i>	3	0	0	0	3
<i>Other-Residential</i>	3	0	0	0	3
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	15	1	0	0	16
<i>Single Family</i>	3	0	0	0	3
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	6	0	0	0	6
Total Casualties - 2pm	30	1	0	0	31
Casualties - 5pm					
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	1	0	0	0	1
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	4	0	0	0	4
<i>Commercial</i>	11	0	0	0	11
<i>Other-Residential</i>	4	0	0	0	4
<i>Industrial</i>	2	0	0	0	2
Total Casualties - 5pm	22	1	0	0	22
Riverside					
Casualties - 2am					
<i>Industrial</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Riverside					
Casualties - 2pm					
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
San Bernardino					
Casualties - 2am					
<i>Hotels</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2am	1	0	0	0	1
Casualties - 2pm					
<i>Industrial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	1
Casualties - 5pm					
<i>Other-Residential</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
San Diego					
Casualties - 2am					
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Single Family	0	0	0	0	0
Industrial	0	0	0	0	0
Hotels	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
Hotels	0	0	0	0	0
Educational	0	0	0	0	0
Commuting	0	0	0	0	0
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Single Family	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
Other-Residential	0	0	0	0	0
Commercial	0	0	0	0	0
Commuting	0	0	0	0	0
Single Family	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Industrial	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
San Luis Obispo					
Casualties - 2am					
Commercial	0	0	0	0	0
Other-Residential	0	0	0	0	0
Industrial	0	0	0	0	0
Single Family	0	0	0	0	0
Commuting	0	0	0	0	0
Educational	0	0	0	0	0
Hotels	0	0	0	0	0
Total Casualties - 2am	0	0	0	0	0
Casualties - 2pm					
Single Family	0	0	0	0	0
Educational	0	0	0	0	0
Other-Residential	0	0	0	0	0
Hotels	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
San Luis Obispo					
Casualties - 2pm					
<i>Commuting</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	0	0	0	0	0
Casualties - 5pm					
<i>Industrial</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
Total Casualties - 5pm	0	0	0	0	0
Santa Barbara					
Casualties - 2am					
<i>Industrial</i>	0	0	0	0	0
<i>Commercial</i>	0	0	0	0	0
<i>Other-Residential</i>	1	0	0	0	1
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Single Family</i>	1	0	0	0	1
<i>Hotels</i>	0	0	0	0	0
Total Casualties - 2am	2	0	0	0	2
Casualties - 2pm					
<i>Commercial</i>	1	0	0	0	1
<i>Single Family</i>	0	0	0	0	0
<i>Other-Residential</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
Total Casualties - 2pm	3	0	0	0	3
Casualties - 5pm					
<i>Other-Residential</i>	0	0	0	0	0
<i>Single Family</i>	0	0	0	0	0
<i>Commercial</i>	1	0	0	0	1
<i>Commuting</i>	0	0	0	0	0
<i>Educational</i>	0	0	0	0	0
<i>Industrial</i>	0	0	0	0	0
<i>Hotels</i>	0	0	0	0	0

	Injury Severity Level				Total
	Severity 1	Severity 2	Severity 3	Severity 4	
California					
Santa Barbara					
Total Casualties - 5pm	2	0	0	0	2
Ventura					
Casualties - 2am					
<i>Educational</i>	0	0	0	0	0
<i>Commuting</i>	0	0	0	0	0
<i>Single Family</i>	184	7	0	0	190
<i>Hotels</i>	0	0	0	0	0
<i>Industrial</i>	6	1	0	0	7
<i>Commercial</i>	4	0	0	0	4
<i>Other-Residential</i>	167	23	2	3	194
Total Casualties - 2am	360	31	2	3	396
Casualties - 2pm					
<i>Industrial</i>	43	5	0	1	50
<i>Educational</i>	86	11	1	2	100
<i>Commuting</i>	1	1	1	0	3
<i>Hotels</i>	0	0	0	0	0
<i>Other-Residential</i>	51	7	1	1	60
<i>Commercial</i>	248	30	2	4	284
<i>Single Family</i>	51	2	0	0	53
Total Casualties - 2pm	481	56	5	8	550
Casualties - 5pm					
<i>Commuting</i>	10	13	23	4	51
<i>Other-Residential</i>	61	9	1	1	72
<i>Commercial</i>	179	22	1	3	205
<i>Hotels</i>	0	0	0	0	0
<i>Educational</i>	9	1	0	0	10
<i>Single Family</i>	67	3	0	0	69
<i>Industrial</i>	27	3	0	0	31
Total Casualties - 5pm	353	50	25	9	438
Region Total	NA	NA	NA	NA	NA

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Debris Summary Report

May 15, 2024

All values are in thousands of tons.

	Brick, Wood & Others	Concrete & Steel	Total
California			
San Luis Obispo	0	0	0
Riverside	0	0	0
San Bernardino	1	0	1
Ventura	227	341	568
Kern	0	0	0
Orange	20	15	35
San Diego	0	0	0
Los Angeles	895	719	1,615
Santa Barbara	2	2	4
Total	1,146	1,077	2,224
Region Total	1,146	1,077	2,224

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Losses For Buildings

May 15, 2024

All values are in thousands of dollars

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
California										
San Bernardino	870	15,402	8,167	1,289	0.00	90	82	100	196	26,195
Riverside	191	4,924	2,701	232	0.00	13	20	19	47	8,147
San Luis Obispo	3	102	60	10	0.00	0	0	0	1	176
Santa Barbara	3,639	47,270	25,869	3,503	0.06	736	555	642	872	83,086
Kern	237	4,097	2,411	467	0.00	24	21	24	37	7,318
Ventura	583,065	3,189,999	1,484,249	158,910	2.49	221,296	118,863	147,596	119,175	6,023,152
Orange	35,110	397,863	215,439	22,127	0.08	5,704	6,290	7,140	8,468	698,142
San Diego	5	280	167	16	0.00	1	1	1	1	471
Los Angeles	1,523,042	8,922,648	4,283,851	328,362	0.69	606,664	377,969	450,363	445,464	16,938,364

	Capital Stock Losses				Loss Ratio %	Income Losses				Total Loss
	Cost Structural Damage	Cost Non-struct. Damage	Cost Contents Damage	Inventory Loss		Relocation Loss	Capital Related Loss	Wages Losses	Rental Income Loss	
Total	2,146,162	12,582,584	6,022,916	514,915	0.37	834,527	503,802	605,885	574,259	23,785,051
Region Total	2,146,162	12,582,584	6,022,916	514,915	0.37	834,527	503,802	605,885	574,259	23,785,051

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Loss For Transportation

May 15, 2024

All values are in thousands of dollars

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
California								
Kern								
Segments	0	0	0					0
Bridges	26	0	0					26
Tunnels	0	0	0					0
Facilities		180	0	46	0	0	947	1,173
Total	26	180	0	46	0	0	947	1,199
Los Angeles								
Segments	0	0	0					0
Bridges	78,437	514	1					78,953
Tunnels	5,333	0	0					5,333
Facilities		8,846	180,911	2,415	57,446	737	274,380	524,735
Total	83,771	9,360	180,912	2,415	57,446	737	274,380	609,021
Orange								
Segments	0	0	0					0
Bridges	1,247	7	0					1,253
Tunnels	0	0	0					0
Facilities		623	0	0	2,262	177	17,543	20,605

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	1,247	630	0	0	2,262	177	17,543	21,859
Riverside								
Segments	0	0	0					0
Bridges	16	0	0					16
Tunnels	0	0	0					0
Facilities		103	0	125	0	0	668	895
Total	16	103	0	125	0	0	668	912
San Bernardino								
Segments	0	0	0					0
Bridges	121	0	0					121
Tunnels	0	0	0					0
Facilities		419	0	43	0	0	2,660	3,122
Total	121	419	0	43	0	0	2,660	3,243
San Diego								
Segments	0	0	0					0
Bridges	3	0	0					3
Tunnels	0	0	0					0
Facilities		46	1,264	2	440	4	1,143	2,900
Total	3	46	1,264	2	440	4	1,143	2,904
San Luis Obispo								
Segments	0	0	0					0
Bridges	1	0	0					1
Tunnels	0	0	0					0
Facilities		31	0	5	33	0	164	233

	Highway	Railway	Light Rail	Bus Facility	Ports	Ferries	Airport	Total
Total	1	31	0	5	33	0	164	234
Santa Barbara								
<i>Segments</i>	0	0	0					0
<i>Bridges</i>	26	1	0					27
<i>Tunnels</i>	0	0	0					0
<i>Facilities</i>		471	0	82	1,539	168	1,879	4,138
Total	26	471	0	82	1,539	168	1,879	4,165
Ventura								
<i>Segments</i>	0	0	0					0
<i>Bridges</i>	38,312	1,830	0					40,142
<i>Tunnels</i>	0	0	0					0
<i>Facilities</i>		2,596	0	574	17,534	549	13,675	34,929
Total	38,312	4,426	0	574	17,534	549	13,675	75,071
Total	123,523	15,665	182,176	3,293	79,254	1,636	313,060	718,607
Region Total	123,523	15,665	182,176	3,293	79,254	1,636	313,060	718,607

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Direct Economic Loss For Utilities

May 15, 2024

All values are in thousands of dollars

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
California							
Kern							
Facilities	112	369	1	291	216,999	6	217,779
Pipelines	378	190	0	0			568
Total	490	559	1	291	216,999	6	218,346
Los Angeles							
Facilities	18,957	285,127	122	14,563	2,618,299	336	2,937,405
Pipelines	8,912	4,477	0	0			13,388
Total	27,868	289,604	122	14,563	2,618,299	336	2,950,793
Orange							
Facilities	1,045	9,515	3	774	67,240	20	78,597
Pipelines	583	293	0	0			876
Total	1,628	9,808	3	774	67,240	20	79,473
Riverside							
Facilities	253	1,475	0	75	10,356	2	12,161

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
<i>Pipelines</i>	166	83	0	0			249
Total	419	1,559	0	75	10,356	2	12,411
San Bernardino							
<i>Facilities</i>	112	1,478	0	150	75,075	5	76,821
<i>Pipelines</i>	344	173	0	0			517
Total	456	1,651	0	150	75,075	5	77,337
San Diego							
<i>Facilities</i>	1	789	0	75	9,719	0	10,585
<i>Pipelines</i>	127	64	0	0			191
Total	128	853	0	75	9,719	0	10,776
San Luis Obispo							
<i>Facilities</i>	1	141	0	0	12,707	0	12,849
<i>Pipelines</i>	83	42	0	0			124
Total	83	183	0	0	12,707	0	12,974
Santa Barbara							
<i>Facilities</i>	0	10,758	0	1,167	5,589	34	17,547
<i>Pipelines</i>	150	76	0	0			226
Total	150	10,834	0	1,167	5,589	34	17,773
Ventura							
<i>Facilities</i>	29,938	294,547	11	4,467	1,809,316	595	2,138,875
<i>Pipelines</i>	4,812	2,417	0	0			7,229

	Potable Water	Waste Water	Oil Systems	Natural Gas	Electric Power	Communication	Total
Total	34,750	296,965	11	4,467	1,809,316	595	2,146,104
Total	65,975	612,014	138	21,561	4,825,301	998	5,525,987
Region Total	65,975	612,014	138	21,561	4,825,301	998	5,525,987

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	7.40 - 29.50
	Building Contents	1.00 - 4.00
	Business Interruption	1.30 - 5.00
Infrastructure	Lifelines Damage	
Total		11.90 - 47.60

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	320,200	33,500	11,000	364,700
Minor	28,900	9,900	3,400	42,200
Major	2,100	910	370	3,380
Destroyed	210	60	20	290
Total	351,410	44,370	14,790	410,570

Estimated Casualties : Night Time

Severity Level	Description	# Persons
Level 1	Medical Aid	600 - 2,000
Level 2	Hospital Care	40 - 150
Level 3	Life-threatening	< 10
Level 4	Fatalities	< 10

Estimated Shelter Needs

Type	Households	People
Displaced Households	1,300 - 5,000	3,250 - 12,500
Public Shelter	560	1,410

Comments :

*Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.

Disclaimer:

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

Earthquake Information

Location :

Origin Time:

Magnitude : 7.20

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 23,583,202

Building Exposure : (\$ Millions)

Residential	
Commercial	799,712
Other	587,754
Total	

Counties :

Major Metro Area :

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	7.40 - 29.50
	Building Contents	1.00 - 4.00
	Business Interruption	1.30 - 5.00
Infrastructure	Lifelines Damage	
Total		11.90 - 47.60

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	320,200	33,500	11,000	364,700
Minor	28,900	9,900	3,400	42,200
Major	2,100	910	370	3,380
Destroyed	210	60	20	290
Total	351,410	44,370	14,790	410,570

Estimated Casualties : Day Time

Severity Level	Description	# Persons
Level 1	Medical Aid	900 - 4,000
Level 2	Hospital Care	80 - 300
Level 3	Life-threatening	10 - 20
Level 4	Fatalities	10 - 30

Estimated Shelter Needs

Type	Households	People
Displaced Households	1,300 - 5,000	3,250 - 12,500
Public Shelter	560	1,410

Comments :

**Hazus damage estimates are presented using FEMA Preliminary Damage Assessment (PDA) categories. These estimates should be used for planning purposes and may not reflect actual observed damages from the PDA process.*

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Earthquake Information

Location :

Origin Time:

Magnitude : 7.20

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 23,583,202

Building Exposure : (\$ Millions)

Residential	
Commercial	799,712
Other	587,754
Total	

Counties :

Major Metro Area :

Hazus Quick Assessment Report

Estimated Economic Loss (\$ Billions)

Category	Description	Range
General Building Stock	Building Damage	7.40 - 29.50
	Building Contents	1.00 - 4.00
	Business Interruption	1.30 - 5.00
Infrastructure	Lifelines Damage	
Total		11.90 - 47.60

Preliminary Damage Assessment (PDA) Estimates

Description	Residential	Commercial	Other	Total
Affected	320,200	33,500	11,000	364,700
Minor	28,900	9,900	3,400	42,200
Major	2,100	910	370	3,380
Destroyed	210	60	20	290
Total	351,410	44,370	14,790	410,570

Estimated Casualties : Commute Time

Severity Level	Description	# Persons
Level 1	Medical Aid	600 - 3,000
Level 2	Hospital Care	70 - 300
Level 3	Life-threatening	30 - 110
Level 4	Fatalities	10 - 40

Estimated Shelter Needs

Type	Households	People
Displaced Households	1,300 - 5,000	3,250 - 12,500
Public Shelter	560	1,410

Comments :

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Earthquake Information

Location :

Origin Time:

Magnitude : 7.20

Epicenter Latitude/Longitude :
/

Depth & Type : /U

Name :
NA

Ground Motion /Attenuation :

Maximum PGA: 1.00

Information Sources:

Comments :

Population and Building Exposure

Population: 23,583,202

Building Exposure : (\$ Millions)

Residential	
Commercial	799,712
Other	587,754
Total	

Counties :

Major Metro Area :

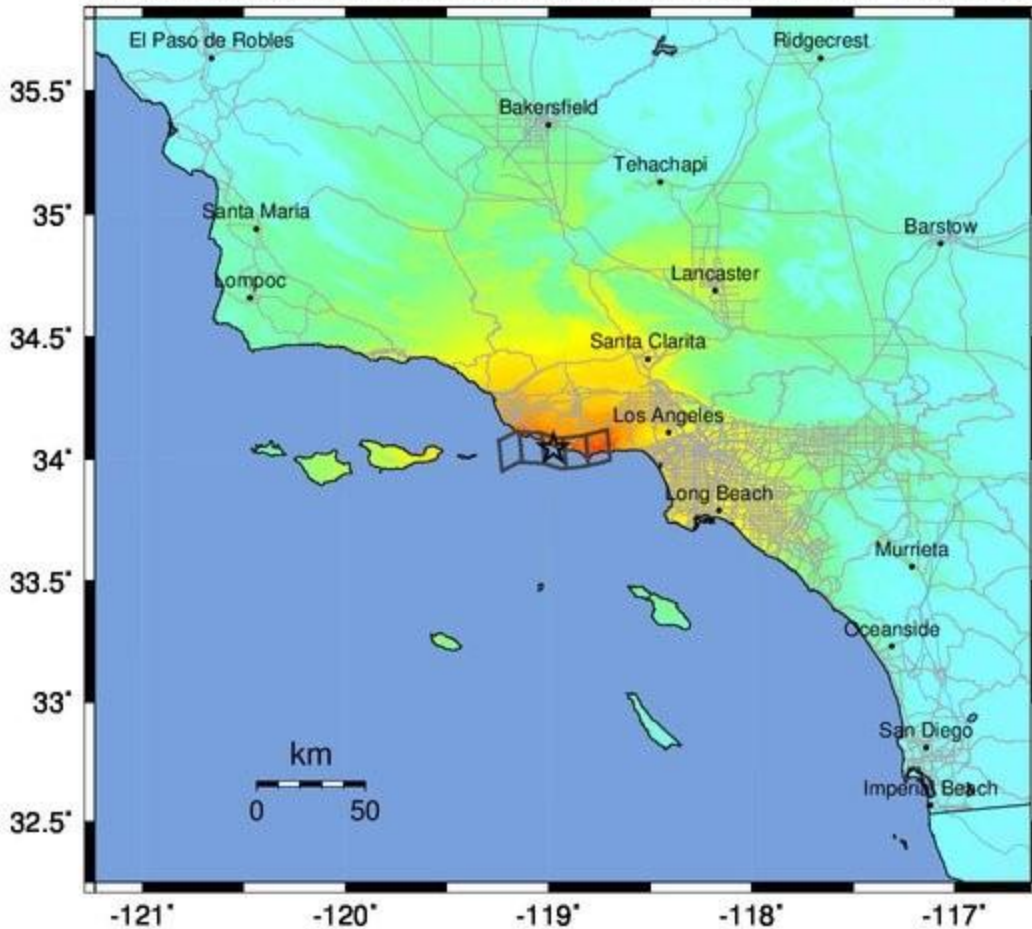
Shelter Summary Report

May 15, 2024

	# of Displaced Households	# of People Needing Short Term Shelter
California		
San Luis Obispo	0	0
Riverside	0	0
San Bernardino	0	0
Ventura	820	538
Kern	0	0
Orange	2	1
San Diego	0	0
Los Angeles	1,769	869
Santa Barbara	0	0
Total	2,591	1,408
Region Total	2,591	1,408

Totals only reflect data for those census tracts/blocks included in the user's study region and will reflect the entire county/state only if all of the census blocks for that county/states were selected at the time of study region creation.

-- Earthquake Planning Scenario --
ShakeMap for Anacapa-Dume alt 1 - Median ground motions Scenario
 Scenario Date: May 16, 2017 08:31:59 AM MDT M 7.2 N34.04 W118.98 Depth: 9.9km



PLANNING SCENARIO ONLY -- Map Version 10 Processed 2017-05-16 12:58:11 PM MDT

PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Mod./Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<0.05	0.3	2.8	6.2	12	22	40	75	>139
PEAK VEL.(cm/s)	<0.02	0.1	1.4	4.7	9.6	20	41	86	>178
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Scale based upon Worden et al. (2012)